IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

First named inventor: Santu NAUKKARINEN, et al.

Serial No.: 10/534,012

Filed: May 5, 2005

Title: Mobile Electronic System

Group Art Unit: 2618

Examiner: Tu X. NGUYEN

MAIL STOP APPEAL BRIEFS--PATENTS
COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

BRIEF FOR APPELLANT

Sir:

This is a brief for an appeal from a final Office Action mailed April 13, 2009, and a subsequent Advisory Action, mailed June 18, 2009, maintaining the rejections in response to a Request for Reconsideration mailed on June 10, 2009.

This brief follows a Notice of Appeal mailed on July 13, 2009 along with a Pre-Appeal Brief Request for Review of even date and a subsequent Panel Decision of August 20, 2009 maintaining the claim rejections.

For all of the reasons discussed below, it is the belief of the undersigned that the above-identified claims of the application do distinguish the invention from the art relied on by the Examiner.

I hereby certify that this communication is being deposited with the United States Postal Service today, **September 18, 2009**, in an envelope with sufficient postage as first-class mail addressed to the Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Lissette Ramos

09/22/2009 HDESTA1 00000019 10534012

01 FC:1402 540.00 OP

Table of Contents

I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest in this appeal is Nokia Corporation, a corporation organized under the laws of Finland.

II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

There are no related appeals or interferences.

III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))

Claims 1-25 are pending in the application, and all claims are rejected. Applicant appeals the rejection of claims 1-25.

IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))

Applicant filed a Request for Reconsideration on June 10, 2009 and a Pre-Appeal Brief for Review on July 15, 2009 in response to Final Office Action. No claims were amended.

V. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

Claim 1 is directed to an apparatus comprising at least one processing component configured to process data indicative of the current posture of the apparatus for enabling a posture related presentation of information to a user via an output component. *See* Application as filed, page 8, lines 13-28, and page 15, lines 29-32, and Figures 1-2 (element 10) and 5 (elements 52-54). The processing includes selecting one of at least two different modes of presentation of the information depending on the current posture of the apparatus. *See* Application as filed, page 9, lines 27-31, and page 9, line 29- page 10, line 30, and Figures 1-2. Thus, for example, when the current posture of the apparatus is horizontal, one mode of presentation is selected and when the current posture of the apparatus is vertical, a second mode of presentation is selected. *See* Application as filed, page 9, lines 27-31, and page 9, line 29- page 10, line 30, and Figures 1-2.

Independent claim 15 is directed to a method comprising performing magnetic measurements in three dimensions in a mobile electronic system. *See* Application as filed, page 8, lines 20-21. Based on the magnetic measurements, data indicative of the current posture of the mobile electronic system is determined. *See* Application as filed, page 9, lines 22-25. The data indicative of the current posture is processed for enabling posture related presentation of information to the user of the mobile electronic system, wherein the processing comprises selecting one of at least two different modes of presentation depending on the current posture of the system. *See* Application as filed, page 9, lines 27-31, and page 9, line 29- page 10, line 30, and Figures 1-2.

Independent claim 24 is directed to a mobile electronic system. The mobile electronic system comprises an output component, a 3D magnetometer, and at least one processing component. *See* Application as filed, page 8, lines 13-18 and Figures 1-3 (elements 10 and 12) and Figure 5 (elements 50-54). The output component enables presentation of information to a user of the mobile electronic system. *See* Figures 1-3. The 3D magnetometer is configured to perform magnetic measurements in three dimensions and to provide data indicative of the current posture of the mobile electronic system based on the measurements. *See* Application as filed, page 8, lines 20-28. The at least one processing component is configured to process the data provided by the 3D magnetometer for enabling a posture related presentation of information via the output component, the processing including selecting one of at least two different modes of presentation depending on the current position of the system. *See* Application as filed, page 9, line 27-page 10, lines 30 and page 15, line 20-page 17, line 10, and Figures 1-2 and 5.

Independent claim 25 is directed to an apparatus comprising means for receiving data indicative of the current posture of the apparatus and for processing the data for enabling a posture related presentation of information to a user, the processing including selecting one of at least two different modes of presentation depending on the current posture of the apparatus. The means for receiving and processing correspond to the at least one processing component described in independent apparatus claim 1 and in the specification of the application as filed, including at page 9, line 22-page10,

line 30 and page 15, lines 20-32 and shown in Figure 5 as elements 52, 53 and 54. The apparatus further comprises means for linking said means for receiving and processing data to means for performing magnetic measurements in three dimensions and for providing said data indicative of the current posture of said apparatus based on said measurements. The means for linking corresponds to the first and second heading signals, described in the specification of the application as filed, including at page 16, lines 1-21 and shown in Figure 5. The means for performing and providing correspond to the 3D magnetometer, which is described in independent apparatus claim 1 and in the specification of the application as filed, including at page 8, line 20-page 9, line 20, and in Figure 5, as elements 50 and 51.

With the invention of the independent claims, for example, an apparatus having a 3D magnetometer is able to sense the orientation of the apparatus in a two-dimensional sense, like a compass, as well as the inclination of the apparatus, and thereby determine the current posture of the apparatus and depending on the current posture, the presentation of information can be altered. *See* Application as filed, page 4, line 26-page 5, line 4. For example, page 11, line 28-page 12, line 10 describes, and Figure 3 shows, a mobile phone 10 having a display 12 where the phone is fixed in a car stand which is connected to the dashboard of a car. When the phone is so positioned, its posture causes the display to present posture related information in a particular mode (in this case the mode shown in Figure 1 using a directional arrow 15). A second mode of presentation of information on the mobile phone is show in Figure 2 for simulating a floating 3-dimensional compass. Such a mode of presentation can be presented, for example, when the phone is tilted by the user. The apparatus, such as a mobile phone, comprises at least one processing component (such as a 3D magnetometer 51 as seen in Figure 5), so as to determine the current posture of the apparatus (phone). *See* Application as filed, page 11, lines 2-13 and page 12, lines 12-19.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

Claims 1-10 and 14-25 are rejected under 35 U.S.C. 102(e) as anticipated by Levine et al. (U.S. 2003/0135327)(hereinafter Levine).

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levine in view of Ellenby et al. (U.S. 2002/0140745)(hereinafter Ellenby).

VII. ARGUMENT (37 C.F.R. § 41.37(c)(1)(vii))

A. Claims 1-10 and 14-25 are not anticipated by Levine

With respect to claim 1, it is asserted by the Office that Levine discloses an apparatus comprising at least one processing component configured to process data (Figure 1, element 110) indicative of the current posture of said apparatus for enabling a posture related presentation of information to a user via an output processing including selecting one of at least two different modes (paragraph 102) of presentation depending on said current posture of the apparatus (paragraph 027-030). Final Office Action, page 3.

Levine is directed to a navigation system, such as for use on aircraft, which uses multiple sensors, including an Inertial Navigation System (INS), a GPS receiver, and a 3-Axis Magnetometer (MAG). A microprocessor controls which data is used from the INS, GPS and MAG, as well as the trustworthiness of the specific sensor so as to use the sensor which is determined to be the most trustworthy. Levine, Abstract. Various terms are defined in Levine, including "Heading or True Heading" and "Magnetic Heading" (paragraphs [0027-0030]). As discussed at paragraphs [0102] and [0103], the computing device determines the trustworthiness of the data received from the GPS, INS and MAG so as to determine which data to use. The selecting of an operational mode is performed by keypad 210. *See* Levine, paragraph [0102]. At paragraph [0104] it is disclosed that the computing device is able to improve the presentation of navigation information on display 220. *See also* Figure 1. It is disclosed that a two-dimensional map database could be used to show the craft on a map or a three-dimensional display to show position of the craft relative to features of the terrain.

Unlike the subject matter of claim 1, Levine does not disclose any relationship between the current posture of an apparatus and the mode of presentation of information to a user via an output component, and as such, it does not disclose that processing includes selecting one of at least two different modes of presentation depending on said current posture of said apparatus. While Levine does disclose that different operational modes can be selected and that different databases or maps can be used for presentation, it is clear that the selection of either operational modes or presentation databases occurs entirely independent of the posture of the device.

At page 2 of the Advisory Action, the Office states:

> Levine et al. disclose depend on the nose of an aircraft is pointing in direction (current posture) (par.027-030), the computing device 110 is a digital signal processor so that signal conditioning of the outputs from various sensors can be implemented in software, IN ADDITION to interfacing the various sensors, the computing device also receives input [from] keypad (par.0102), the Examiner interprets that the device select mode of output can be implemented in software; alternatively, the device provides additional option for manually select mode of operation from the user input.

Applicant respectfully submits that this interpretation of Levine is incorrect and that paragraph [0102] clearly discloses that only the keyboard is used for selecting the operational mode and not the various sensors that can be implemented in software. Paragraph [0102] discloses:

> Most preferably, computing device 110 is a digital signal processor so that signal conditioning of the outputs from the various sensors, 140, 130, and 120 can be implemented in software. In addition to interfacing the various sensors 140, 130, 120, computing device 110 also receives input from filter 200, keypad 210 which may be used to select from various operational modes, enter or select waypoints and routes, select map scale, security code, flight and/or tail number, etc., and computing device 110 provides output to a user through display 220 and audio input/output 260. (emphasis added)

The underlined phrase does not refer to any element other than the keypad. A person having ordinary skill in the art would acknowledge that Levine does not disclose that filter 200 performs the underlined acts, and as such it would be a clearly incorrect reading of Levine to interpret that the underlined acts are performed by the sensors 140, 130 and 120 recited just prior to the filter. The text of Levine makes clear that it is the

keypad only, which may be used to make the various selections and entries. Thus, not only are the sensors in the device unable to select the operating mode, but the device itself is unable to make such a selection, as a keypad would be operated manually by a user. This conclusion can also be inferred from the remainder of paragraph [0102], where Levine makes it clear that information is received from the sensors after the operational mode is selected by stating, "[i]n a typical operational mode, computing device 110 receives period positional information from GPS receiver 140. Upon receiving such information, computing device 110 reads positional information from the INS 130." The operational mode in Levine has already been selected prior to receiving the positional information. Thus, contrary to the assertion of the Office, an operational mode in Levine could not be selected depending on the current posture of the apparatus.

In addition, the "operational mode" as disclosed in Levine is not a "mode of presentation" as disclosed in claim 1. As is clearly shown in Figures 1 and Figures 2 of the present application, the at least two different modes of presentation are in reference to the presentation of information by the output component of the apparatus. In each mode, the information is presented in a different fashion. The "operational mode" of Levine does not relate to the presentation of information. The operational mode in Levine appears to be related to the functions and capabilities of the device, rather than a presentation mode. For example, as stated above, Levine provides that in a typical operational mode, the device is able to receive positional information from a GPS receiver. There is no mention of how the information is presented in a specific operational mode or even if there is a difference between how information is presented in different operational modes.

Further evidence of the fact that the "operational mode" does not encompass a posture related presentation of information is the fact that Levine explicitly discloses elsewhere that the mode of presenting navigation information can be altered on the display by the user. Paragraph [0104] of Levine states:

> In addition, computing device 110 may one or more databases to improve the presentation of navigation information on display 220. By way of example and not limitation, a 2-dimensional map database could be used to show the craft on a

> map. By selecting the overall area to display, a user can see his or her position relative to landmarks, i.e., cites, bodies of water, roads, etc., or plan a route to follow. Alternatively, topographical data could be used to simulate a 3-dimensional display to show the position of the craft relative to features of the terrain. Such a feature could help pilots detect ground proximity far earlier than other on-board systems could. Similarly, when the inventive system is adapted for use on a boat, a database could be used to display waterway features, or hazards, relative to the boat's position, such as channels, boating hazards and obstructions, mooring details, bottom contours, buoy information, locks, etc.

In Levine, if a user would like to adjust the presentation of navigational information, the use may manually select the display. Whether the display shows a two-dimensional or a three-dimensional map is entirely a matter of user preference. Levine discloses no relationship between the posture of a device, and the way information is presented to the user. Furthermore, if the "operational mode" described in paragraph [0102] of Levine, which the Office has analogized to the at least two different modes of presentation disclosed in claim 1, is in fact a mode of presentation, then this disclosure in paragraph [0104] would be entirely unnecessary. The user would have already selected the mode for presentation of information when they selected the operational mode. Thus, it is clear that the operational mode does not relate to how information is presented, nor a posture related presentation mode. If the operational mode did encompass specific modes of presentation, it can be assumed Levine would have stated this in discussing operational modes, rather than discussing modes of presentation separately and using different terminology.

In summary, Levine fails to anticipate the invention of claim 1 because Levine does not disclose an apparatus comprising at least one processing component to process data indicative of the current posture of said apparatus for enabling a posture related presentation of information to a user via an output component, said processing including selecting one of at least two different modes of presentation depending on said current posture of said apparatus.

For the same reasons as those recited with respect to claim 1, it is respectfully submitted that independent claims 15, 24, and 25 are also not anticipated by Levine.

At least in view of their dependency on the independent claim, it is respectfully submitted that claims 2-14 and 16-23 are also not anticipated by Levine.

B. Claims 11-13 are not suggested by the combination of Levine and Ellenby

Because claims 11-13 depend from independent claim 24, which as argued above is not anticipated by Levine, it is respectfully submitted that at least in view of such dependency, claims 11-13 are not disclosed by the combination of Levine and Ellenby.

Conclusion

For the reasons discussed above, applicant respectfully submits that the rejections of the final Office Action have been shown to be inapplicable, and respectfully requests that the Board reverses the rejections to pending claims 1-25.

Respectfully submitted,

September 18, 2009
Date

Alfred A. Fressola
Registration No. 27,550

WARE, FRESSOLA, VAN DER SLUYS
& ADOLPHSON LLP
755 Main Street, P.O. Box 224
Monroe, CT 06468-0224

Tel: (203) 261-1234
Cust. No.: 004955

VIII. CLAIMS APPENDIX 37 C.F.R. §41.37(c)(1)(viii)

1. (previously presented) An apparatus comprising
- at least one processing component configured to process data indicative of the current posture of said apparatus for enabling a posture related presentation of information to a user via an output component, said processing including selecting one of at least two different modes of presentation depending on said current posture of said apparatus.

2. (previously presented) The apparatus according to claim 1, wherein said at least one processing component is configured to present compass information via said output component based on said data.

3. (previously presented) The apparatus according to claim 2, further comprising said output component, wherein said output component comprise a 3D display for presenting said compass information.

4. (previously presented) The apparatus according to claim 3, wherein said at least one processing component is configured to present a floating compass on said 3D display based on said data.

5. (previously presented) The apparatus according to claim 1, wherein said at least one processing component is configured to receive said data indicative of the current posture of said apparatus from a 3D magnetometer and wherein said at least one processing component is configured to use additional measurement data provided by at least one additional sensor for enabling a posture related presentation of information via said output component.

6. (previously presented) The apparatus according to claim 5, wherein said at least one processing component is configured to use said additional measurement data provided by said at least one additional sensor at least for one of the following:

adjusting a presentation of information via said output component and filtering signals provided by said 3D magnetometer.

7. (previously presented) The apparatus according to claim 5, further comprising said at least one additional sensor, wherein said at least one additional sensor comprises a 2D or 3D linear accelerometer configured to measure the acceleration of said mobile electronic system in three dimensions.

8. (previously presented) The apparatus according to claim 5, further comprising said at least one additional sensor, wherein said at least one additional sensor comprises a 3D angular accelerometer configured to measure the angular acceleration of said mobile electronic system in three dimensions.

9. (previously presented) The apparatus according to claim 8, further comprising said 3D magnetometer, wherein said 3D magnetometer is configured to provide first data indicating a current heading of said mobile electronic system, wherein said 3D angular accelerometer is configured to provide second data indicating a current heading of said mobile electronic system, and wherein said at least one processing component comprises a complementary filter configured to combine said first and said second data indicating a current heading of said mobile electronic system.

10. (previously presented) The mobile electronic system according to claim 24, realizing an inertial navigation system.

11. (previously presented) The mobile electronic system according to claim 24, wherein at least said output component is comprised in a user equipment, wherein at least said 3D magnetometer is comprised in a complementary unit external to said user equipment, wherein said user equipment and said complementary unit comprise a respective connection component rigidly and electrically connecting

said complementary unit and said user equipment for providing signals which are based on magnetic measurements of said 3D magnetometer to said user equipment.

12. (original) A complementary unit for a mobile electronic system according to claim 11.

13. (original) A user equipment for a mobile electronic system according to claim 11.

14. (previously presented) A user equipment comprising a mobile electronic system according to claim 24.

15. (previously presented) A method for use in a mobile electronic system, said method comprising:
- performing magnetic measurements in three dimensions in said mobile electronic system;
- determining data indicative of the current posture of said mobile electronic system based on said performed magnetic measurements; and
- processing said data for enabling a posture related presentation of information to a user of said mobile electronic system, said processing comprising selecting one of at least two different modes of presentation depending on said current posture of said system.

16. (previously presented) The method according to claim 15, comprising presenting compass information obtained in said processing.

17. (previously presented) The method according to claim 16, comprising presenting said compass information on a display.

18. (previously presented) The method according to claim 17, comprising presenting a floating compass on a 3D display.

19. (original) The method according to claim 15, further comprising performing additional measurements in said mobile electronic system, wherein said processing is based in addition on measurement data resulting in said additional measurements.

20. (original) The method according to claim 19, wherein said processing comprises using said additional measurement data at least for one of the following: adjusting a presentation of information and filtering signals resulting in said performed magnetic measurements.

21. (original) The method according to claim 19, wherein performing said additional measurements comprises measuring the acceleration of said mobile electronic system in three dimensions.

22. (original) The method according to claim 19, wherein performing said additional measurements comprises measuring the angular acceleration of said mobile electronic system in three dimensions.

23. (original) The method according to claim 22, wherein said processing comprises combining first data indicating a current heading of said mobile electronic system and second data indicating a current heading of said mobile electronic system by a complementary filtering, which first data is based on said magnetic measurements and which second data is based on said angular acceleration measurement.

24. (previously presented) A mobile electronic system comprising
- an output component enabling a presentation of information to a user of said mobile electronic system;

- a 3D magnetometer configured to perform magnetic measurements in three dimensions and to provide data indicative of the current posture of said mobile electronic system based on said measurements; and
- at least one processing component configured to process said data provided by said 3D magnetometer for enabling a posture related presentation of information via said output component, said processing including selecting one of at least two different modes of presentation depending on said current posture of said system.

25. (previously presented) An apparatus comprising
- means for receiving data indicative of the current posture of said apparatus and for processing said data for enabling a posture related presentation of information to a user, said processing including selecting one of at least two different modes of presentation depending on said current posture of said apparatus; and
- means for linking said means for receiving and processing data to means for performing magnetic measurements in three dimensions and for providing said data indicative of the current posture of said apparatus based on said measurements.

IX. EVIDENCE APPENDIX 37 C.F.R. §41.37(c)(1)(ix)

No Evidence Appendix.

X. RELATED PROCEEDINGS APPENDIX 37 C.F.R. §41.37(c)(1)(x)

None.